

REMARKS

Entry of the foregoing, reexamination and further and favorable reconsideration of the subject application in light of the following remarks, pursuant to and consistent with 37 C.F.R. § 1.112, are respectfully requested.

The Office Action Summary correctly indicates that claims 1-5 are pending in the application and stand rejected.

Claim 1 has been amended to recite that the diaphragm is provided at the peripheral edge thereof with an annular engagement part, which is formed to be bent down from the peripheral edge thereof and have an approximate L-shape in cross-section so as to extend along the inner side surface and bottom surface of [an] annular groove [formed in the valve body], and that an elastic member is disposed in said annular groove and between the bonnet and the annular engagement part of the diaphragm. Support for the amendments to claim 1 can be found at least in Figs. 2 to 4.

No prohibited new matter has been introduced by way of the above amendments. Applicants reserve the right to file a continuation or divisional application on subject matter canceled by way of this Amendment.

Rejections under 35 U.S.C. § 102

Claims 1-5 stand rejected under 35 U.S.C. § 102 as allegedly anticipated by Japanese Patent No. JP6002775 (Yokoyama et al.). Without acceding to the alleged basis of the rejection, claim 1 has been amended. Claims 2-5 depend from claim 1. To the extent that the rejection might be applied to the claims as amended, the rejection is traversed.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal*

Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990).

The valve recited in the present claims has the feature that the diaphragm has around its edge, an annular engagement part. The annular engagement part is formed to be bent down from the peripheral edge and have an approximate L-shape in cross-section so as to extend along the inner side surface and bottom surface of an annular groove in the valve body. The annular engagement part is fitted tightly into the annular groove by an elastic member disposed in the annular groove between the bonnet and the annular engagement part of the diaphragm.

An elastic member is disposed in the annular groove to press the annular engagement part between the elastic member and the inner side and bottom surfaces of the annular groove. The elastic member is surrounded by the bonnet and the inner side surface of the groove. Thus, when the valve is assembled, the elastic member applies both vertical and lateral forces to the outer side surface and bottom surface of the annular engagement part, thereby providing a very high seal performance. This feature is illustrated, e.g., in Figs. 2-4.

An advantage of the presently claimed invention is that even if the fluid pressure or temperature fluctuate and cause creep at the peripheral edge and annular engagement part of the diaphragm, a good seal performance can be maintained. Further, even if the flat part and bonnet of the body become distorted so as to decrease the vertical press force, the lateral press force of the elastic member against the annular engagement part is maintained. This combination provides good seal performance over a long period.

By contrast, Yokoyama et al. does not disclose this feature of the present invention. Specifically as described in paragraphs [0003] to [0009] and paragraph [0012] of Yokoyama

et al., bottom surface 17 of peripheral part 12 (not annular engagement part 13) of the diaphragm is fixedly secured to the flat part of the body by the elastic effect of o-ring 20. As may be seen in Yokoyama et al. Fig. 2, the annular engagement part 12 does not have an approximate L-shape in cross section such that it extends along the inner side surface and bottom surface of annular groove 7, and o-ring 20 is not disposed in the annular groove 7 in the body.

Therefore, the elastic member of Yokoyama et al., i.e., o-ring 20, cannot provide an effect of pressing annular engagement part 12 of diaphragm 9 against the inner side surface and bottom surface of annular groove 7. Consequently, the arrangement disclosed in Yokoyama et al. does not provide the advantages of the present invention.

Yokoyama et al. does not teach or suggest all the features of the present invention. Thus, the present claims must be patentable over Yokoyama et al. In view of the foregoing, withdrawal of the rejection is proper and is respectfully requested.

CONCLUSION

Further and favorable action in the form of a Notice of Allowance is believed to be next in order. Such action is earnestly solicited.

In the event that there are any questions relating to this application, it would be appreciated if the Examiner would telephone the undersigned concerning such questions so that prosecution of this application may be expedited.

The Director is hereby authorized to charge any appropriate fees that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800.

Respectfully submitted,

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